

REMARKS

Claims 1 and 3-6 are pending in this application.

The courtesies extended to Applicants' representative by Examiner Nguyen at the interview held September 15, 2010, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below, which constitute Applicants' record of the interview.

Claims 1 and 3-6 are rejected under 35 U.S.C. §103(a) over Dickey et al. (U.S. Patent No. 6,240,588). The rejection is respectfully traversed.

Dickey fails to disclose and would not have rendered obvious the claimed combination of features recited in independent claim 1. For example, Dickey fails to disclose and would not have rendered obvious "a diameter of the bore is 10 to 20 mm, a diameter of the small holes is 2.5 to 5 mm, and a total of cross-sectional areas of the plurality of the small holes is 1.2 to 5 times larger than a cross-sectional area of the bore," as recited in independent claim 1 (emphasis added).

A *prima facie* case of obviousness can be established for a claimed range of parameters if the prior art discloses a range that partially overlaps with or lies completely within the claimed range (see MPEP §2144.05(I)).

If the prior art fails to disclose such a range (as the Office Action acknowledges here), a *prima facie* case of obviousness can only be established if the general conditions of a claim are shown in the art, and where the claimed range of parameters is a mere optimization of the general conditions (see MPEP §2144.05(II)). However, a particular parameter must first be recognized as a result-effective variable (a variable which is recognized as achieving a particular result), before the parameter can be considered "optimizable" (see MPEP §2144.05(II)(B), citing *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)). Applicants need not show criticality for the claimed range of parameters unless (1) the parameter is

recognized as a result-effective variable, and (2) the claimed range is a mere optimization of the result-effective variable.

The Office Action acknowledges that Dickey fails to disclose ranges of parameters that overlap or lie completely within the claimed ranges of independent claim 1 (see page 2 of the Office Action). Thus, the Office Action might establish a *prima facie* case of obviousness only if each of the claimed ranges of parameters recited in independent claim 1 are recognized as result-effective variables.

Dickey does not recognize that the claimed ranges of parameters recited in independent claim 1 are result-effective variables. Dickey does not disclose that the diameter of the bore, the diameter of the small holes, and the ratio of the total cross-sectional area of the holes and the cross-sectional area of the bore can be modified in order to gently feed cleaning liquid to a sponge roller and allow rectification of the liquid by the sponge roller. At best, Dickey merely discloses decreasing a diameter of small holes located downstream of the core in order to increase the pressure of the cleaning liquid flowing through the core. Such a teaching does not establish that the diameter of the small holes is a "result-effective variable" because the "result" achieved by Dickey is different from the "result" achieved by independent claim 1.

The Office Action has especially failed to establish a *prima facie* case of obviousness with respect to the feature "a total of cross-sectional areas of the plurality of the small holes is 1.2 to 5 times larger than a cross-sectional area of the bore," as recited in independent claim 1. Even if Dickey discloses the claimed range of diameters for the bore, and the claimed range of diameters for the small holes (which it does not), Dickey still fails to disclose the ratio of the total of cross-sectional areas of the holes and the cross-sectional area of the bore. Indeed, Dickey fails to disclose any ratio of the diameter of the bore to the total of cross-sectional areas of the plurality of small holes. Moreover, Dickey fails to recognize that the

ratio between the total of cross-sectional areas of the plurality of small holes and the cross-sectional area of the bore is a result-effective variable.

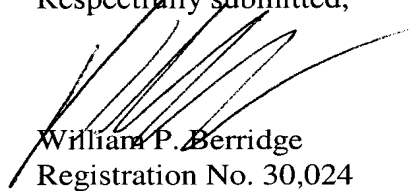
Further, Dickey teaches one of ordinary skill to decrease the cross-sectional area of the holes located on the downstream side of the core so as to increase the pressure of the liquid. The core of claim 1 has a structure that does not increase the pressure of the fluid flowing downstream but feeds the fluid gently to a sponge roller (see also page 5, lines 6-13 of Applicant's specification).

For at least these reasons, independent claim 1 is patentable over Dickey. Claims 3-6 depend from independent claim 1 and are patentable for at least their dependency on independent claim 1, as well as for the additional features they recite. Withdrawal of the rejection is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Petition for Extension of Time

Date: October 15, 2010

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